

FORM U-1A MANUFACTURERS' DATA REPORT FOR PRESSURE VESSELS
 (Alternative Form for Single Chamber, Completely Shop-Fabricated Vessels Only)
 As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

1. Manufactured by Industrial Alloy Fabricators, Inc.
 2. Manufactured for Union Carbide Corp.
 3. Location of Installation Institute, WV
 4. Type horiz 36514-2 D-3391D 1112 Year Built 83
(Horiz or vert tank) (Mfg's Serial No.) (CRN) (Drawing No.) (Ref ID No.)
 5. The chemical and physical properties of all parts meet the requirements of material specifications of the ASME BOILER AND PRESSURE VESSEL CODE. The design, construction, and workmanship conform to ASME Rules, Section VIII, Division 1 1980 (Year) and Addenda to Winter, 82 (Date) and Code Case Nos. Special Service
 Manufacturers' Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report: _____

6. Shell: SB582AlloyG3 .242 .0625 5'-0" OD 19'-9 1/2" OA
(Matl (Spec No Grade)) (Nom Thk (in)) (Corr Allow (in)) (Diam (ft & in)) (Length overall (ft & in))
 7. Seams: wld.dbl.butt spot 85 wld.dbl.butt spot 3
Long (Welded Dbl) RT (Spot or Full) Eff (ksi) H.T. Temp (F) Time (hr) Length (Welded Dbl) RT (Spot Partial or Full) No. of Courses
 8. Heads: (a) Matl. SB582AlloyG3 (b) Matl. _____
(Spec No Grade) (Spec No Grade)

	Location (Top, Bottom, Ends)	Minimum Thickness	Corrosion Allowance	Crown Radius	Knuckle Radius	Elliptical Ratio	Critical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)
(a)	ends	.243	.0625	60	3.75					both
(b)										

If removable, bolts used (describe other fastenings) _____
(Matl Spec No Gr Size No.)

9. Const. for max. allow. working press. FV@212°F & 50 psi at max. temp 572 °F Min temp (when less than 20°F) _____ °F
 Hydro. ~~OR MAX WORKING~~ test pressure 134 psi

10. Safety Valve Outlets: No. _____ Size _____ Location in another part of system

11. Nozzles and Inspection Openings:

Purpose (Inlet, Outlet, Drain)	No.	Diam or Size	Type	Matl	Nom Thk	Reinforcement Matl	How Attached	Location
unknown	10	1 1/2	stub end	SB582-G3	.281	none	welded	sh,hd
"	1	2	"	"	.250	"	"	shell
"	3	3	"	"	.3125	"	"	sh,hd
"	1	8	"	"	.250	SB582-G3	"	shell
manway	1	24	"	"	.250	"	"	"

12. Supports: Skirt no Lugs _____ Legs _____ Other (2) saddles Attached welded to shell
(Yes or no) (No) (No) (Describe) (Where and how)

13. Remarks: Chemical process vessel for non-lethal service

CERTIFICATE OF COMPLIANCE

We certify that the statements made in this report are correct and that all details of design, materials, construction, and workmanship of this vessel conform to the ASME Code for Pressure Vessels, Section VIII, Division 1.

Date 5-23-83 Signed Ind. Alloy Fab. by Marianne Lawrence
(Manufacturer) (Representative)

"U" Certificate of Authorization No. 8351 Expires 3-30 19 86

CERTIFICATE OF SHOP INSPECTION

Vessel made by Industrial Alloy Fabricators at Richmond, VA

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of Ohio & Pa and employed by Arkwright-Boston Manuf. Mutual Ins. **

have inspected the pressure vessel described in this Manufacturer's Data Report on MAY 5 1983, 19 _____, and state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel in accordance with ASME Code, Section VIII, Division 1. By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied concerning the pressure vessel described in the Manufacturers' Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Signed CW Bragg Date MAY 23 1983 Commissions _____
(Inspector) (Where and how)

FORM R-2 REPORT OF ALTERATION
in accordance with provisions of the National Board Inspection Code

1a. Construction performed by: <u>Gaspar, Inc.</u>		153			
(name of "R" organization responsible for construction)		(Form R No.)			
<u>1545 Whipple Ave. SW Canton, OH 44710</u>		37561			
(address)		(PO No., Job No., etc..)			
1b. Design performed by: <u>Gaspar, Inc.</u>		153			
(name of "R" organization responsible for design)		(Form R No.)			
<u>1545 Whipple Ave. SW Canton, OH 44710</u>		37561			
(address)		(PO No., Job No., etc..)			
2. Owner: <u>Bayer CropScience</u>					
(name)					
<u>Route 25 - Building 330 Institute, WV 25112</u>					
(address)					
3. Location of installation <u>Bayer CropScience</u>					
(name)					
<u>Route 25 - Building 330 Institute, WV 25112</u>					
(address)					
4. Unit identification	<u>Pressure Vessel</u>	Name of original manufacturer <u>Industrial Alloy Fabricators, Inc.</u>			
	(boiler, pressure vessel)				
5. Identifying nos.:	<u>36514-2</u>	<u>1112</u>	<u>-----</u>	<u>-----</u>	<u>1983</u>
	(mfg serial No.)	(National Board No.)	(jurisdiction No..)	(other.)	(year built)
6. NBIC Edition / Addenda:	<u>2007</u>	<u>2009</u>			
	(edition)	(addenda)			
Original Code of Construction for Item:	<u>ASME Section VIII, Div.1</u>	<u>1980/1982, Winter</u>			
	(name/section/division)	(edition/addenda)			
Construction Code Used for Alteration Performed:	<u>ASME Section VIII, Div.1</u>	<u>2007/2009</u>			
	(name/section/division)	(edition/addenda)			
7a. Description of construction work: <u>1) Removed existing 3" 150#LJ Nozzle "F" and replaced with a 6" 150#LJ Nozzle with a 1/4"thk</u>					
(use supplemental sheet R-4, if necessary)					
<u>reinforcement pad (SB626-N10276, SB366-N10276, SB575-N10276, SA105). 2) Removed existing 2" 150#LJ Nozzle "L" and replaced</u>					
<u>with a 4" 150#LJ with a 1/4"thk reinforcement pad (SB626-N10276, SB366-N10276, SB575-N10276, SA105). 3) Added a 3" 150#LJ</u>					
<u>Nozzle "S" to the shell (SB622-N10276, SB366-N10276, SA105). 4) Added a 3" 150#LJ Nozzle "T" to head (SB622-N10276,</u>					
<u>SB366-N10276, SA105). 5) Added a 1/4"thk reinforcement pad (SB575-N10276) to 3" 150#LJ Nozzle "Q".</u>					
7b. Description of design scope: <u>1) Removing a 3" 150#LJ Nozzle "F" and replacing with 6" 150#LJ Nozzle with a 1/4"thk</u>					
(use supplemental sheet R-4, if necessary)					
<u>reinforcement pad. 2) Removing a 2" 150#LJ Nozzle "L" and replacing with 4" 150#LJ Nozzle with a 1/4"thk reinforcement pad.</u>					
<u>3) Adding a 3" 150#LJ Nozzle "S" to the shell. 4) Adding a 3" 150#LJ Nozzle "T" to a head. 5) Adding a 1/4"thk reinforcement pad</u>					
<u>To 3" 150#LJ Nozzle "Q".</u>					
Pressure test, if applied <u>65</u> psi MAWP <u>50</u> psi					
8. Replacement Parts. <u>Attached are Manufacturer's Partial Data Reports or Form R-3's properly</u>					
<u>completed for the following items of this report.</u>					
(name of part, item number, data report type, mfg's name, and identifying mark)					
<u>None</u>					
9. Remarks: <u>Alterations performed on site at Bayer CropScience, Institute, WV.</u>					

DESIGN CERTIFICATION

I, Mathew Miller, certify that to the best of my knowledge and belief the statements in this report are correct and that the design change described in this report conforms to the *National Board Inspection Code*.

National Board "R" Certificate of Authorization No. 558 Expires on July 25, 2011

Date 08-03-2010 Gaspar, Inc. Signed Mathew Miller
(name of design organization) (authorized representative)

CERTIFICATE OF DESIGN CHANGE REVIEW

I, Thomas Janoch, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and certificate of competency issued by the jurisdiction of Ohio and employed by OneBeacon America Insurance Company of Lynn, Mass have reviewed the design change as described in this report and state that to the best of my knowledge and belief such change complies with the applicable requirements of the *National Board Inspection Code*.

By signing this certificate, neither the undersigned nor my employer makes any warranty, expressed or implied, concerning the work described in this report. Furthermore, neither the undersigned nor my employer shall be liable in any way for any personal injury, property damage or loss of any kind arising from or connected with this inspection.

Date 08-03-2010 Signed [Signature] Commissions NB-9838A/B PA-2646 OHIO COMM
(inspector) (National Board and jurisdiction no.)

CONSTRUCTION CERTIFICATION

I, Wesley Morgan, certify that to the best of my knowledge and belief the statements in this report are correct and that all material, construction, and workmanship on this Alteration conforms to the *National Board Inspection Code*.

National Board "R" Certificate of Authorization No. 558 Expires on July 25, 2011

Date 8-2-10 Gaspar, Inc. Signed Wesley Morgan
(name of construction organization) (authorized signature)

CERTIFICATE OF INSPECTION

I, Thomas Janoch, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and certificate of competency issued by the jurisdiction of Ohio and employed by OneBeacon America Insurance Company of Lynn, Mass have inspected the work described in this report on 08-03-2010 and state that to the best of my knowledge and belief this work complies with the applicable requirements of the *National Board Inspection Code*.

By signing this certificate, neither the undersigned nor my employer makes any warranty, expressed or implied, concerning the work described in this report. Furthermore, neither the undersigned nor my employer shall be liable in any manner for any personal injury, property damage or loss of any kind arising from or connected with this inspection.

Date 08-03-2010 Signed [Signature] Commissions NB-9838A/B PA-2646 OHIO COMM
(inspector) (National Board and jurisdiction no.)